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NUMBER 2

1. Poor, Rich Iran Seeks End of Chaos
2. Sweden's Capital Celebrates 700th Birthday
3. Towboat Tops Steamer in Mississippi Traffic
4. Peoples of Many Lands Mark Columbus Day
5. Panama's "Mules" Still Haul Treasures

Iran's Kashgais Keep on the Go—With a backward glance for stragglers, a herdsman moves his sheep and goats from dusty over-grazed land. Kashgai tribal leaders recently mobilized 10,000 warriors in support of deposed Premier Mossadegh.

(SEE BULLETIN NO. 1)

JEAN AND FRANC SHOR

action was a setback for Iran's Tudeh (communist) party which had been capitalizing on the discord that marked Mossadegh's rule. Well organized, the Tudeh still remains a definite threat; its activities, if openly backed by the Kremlin, could make Iran a second Korea.

Were communism to gain control in Iran, the "iron curtain" would stretch from the Arctic Ocean to the Arabian Sea, chopping the world in half. Across Iran's highlands, where mountain nomads roam and farmers till the soil by methods old in Bible times, lies the only overland connection left open to the free world between the Mediterranean and India.

One of history's first recorded kingdoms, Iran has seen rulers come and go for more than 4,000 years. The mountain kingdom of Elam existed for nearly 2,000 years before the Assyrians finally overthrew it in the seventh century B.C.

Pathway of Conquerors—Cyrus the Great welded the peoples of Media and Persia into the first empire to occupy most of the lands of the present kingdom of Iran. He conquered Lydia and Babylon. His son, Cambyses II, overthrew Egypt. Two other Persian rulers, Darius and Xerxes, kept up the empire's might until it was crushed by Greek sea power and the army of Alexander the Great, marching toward India.

The name Iran is very old. It is associated with the first migrating peoples to invade the lands east of the Tigris and Euphrates rivers. But for 25 centuries, the kingdoms that followed were called Persia. It was not until 1935 that the government decided to revive the ancient name.

Iran is bordered by Turkey and Iraq on the west, the U.S.S.R. and the Caspian Sea on the north, and Afghanistan and Pakistan on the east. It lies largely on a hot, wind-swept tableland averaging 4,000 feet above sea level. A giant V of snow-capped mountain ranges points toward its northwest corner which is taken up by Azerbaijan Province. On the north, beyond the Elburz Mountains, Iran's most fertile region falls away to the lush semitropical shores of the Caspian. South and east from the Elburz range stretch uninhabited deserts. There are few more desolate regions on earth than the Dasht-i-Kavir (Salt Desert), southeast of Tehran, the capital, and the Dasht-i-Lut which stretches southeast toward Pakistan.

It is hard to get an accurate count of Iran's population. It has been estimated at from 14,000,000 to 20,000,000. At least a sixth are nomadic tribes—Bakhtiari, Kashgai (illustration, cover), Kurds, and Lurs—that are practically independent of government control. They do not stay in one place long enough for a census taker to count them.

References—Iran appears on the National Geographic Society's map of Southwest Asia. Write the Society's headquarters, Washington 6, D. C., for a map list.

For further information, see "We Dwelt in Kashgai Tents," in *The National Geographic Magazine* for June, 1952; "Journey into Troubled Iran," October, 1951; "I Become a Bakhtiari," March, 1947; "Mountain Tribes of Iran and Iraq," March, 1946; and "Old and New in Persia", September, 1939. *(The most recent 12 back issues of The Magazine at any given time may be obtained at a specially discounted price of 50¢ a copy. Earlier issues sell for 65¢ a copy through 1946; $1.00, 1930-1945; $2.00, 1912-1929. Write for prices of issues prior to 1912.)*

See also, in the GEOGRAPHIC SCHOOL BULLETINS, May 11, 1953, "Crisis-Ridden Iran Worries Free World"; "Herds and Hunting Support Iran's Kashgais," October 13, 1952; and "Iran Again Plays Crossroads Role," February 12, 1951.

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UMI

PIX-EMILE G. SERRIES

Tehran Street Scene: Armed Guards, *Chadar*-robed Women—The concealing wraps follow the style of many Moslem lands. Young women choose bright prints while the older (left) prefer black. Street fighting in Iran's capital has marked a series of government crises in recent years.

Bulletin No. 1, October 12, 1953

Poor, Rich Iran Seeks End of Chaos

MOSCOW and the Western world have eyes fixed on Iran, watching to see whether lasting stability in government and finance will be restored in a country torn by more than two years of violent dissension.

This ancient land of the Medes and Persians has become a highly important factor in international affairs. Strategically, it is the land bridge linking Europe and Asia, a route conquering armies have used. In resources, its great wealth of petroleum can contribute to the peaceful welfare of other nations or provide an aggressor with a prime necessity for waging modern warfare.

Shah Returns from Exile—The return of the Shah from exile after an army revolt ousted Premier Mohammed Mossadegh found Iran literally a poor little rich nation. No revenue had been coming in since 1951 when the weeping Premier nationalized the oil industry, thereby halting the big money-making overseas shipments from the refineries. Huge quantities of oil are in storage but the markets for it were lost during Mossadegh's regime.

So empty was the treasury that the Shah had to appeal urgently for aid. President Eisenhower responded with a grant of $45,000,000 and a pledge to continue technical assistance from the United States. His speedy

working, metal-goods manufacture, fishing, and fur-trading. Glass made at Orrefors is famous all over the world. Jönköping is noted for matches; aspen from Swedish forests accounts for their superior quality.

South Sweden is rich farming country and the most fertile and intensively cultivated district is the province of Skåne. There hay, grain, and sugar beets grow in neat rectangles. Cattle graze in level pasturelands. Although there are fewer farms in Skåne than there were 50 years ago, they produce three times as much because of modern scientific methods.

Moated medieval castles add to the sylvan charm of Skåne. Because it is difficult to keep up these large estates, a number of them have been converted into museums or specialized schools.

The brick and half-timber houses of Skåne resemble those of Denmark and Germany rather than the red-painted timber farmhouses so typical of many provinces of Sweden.

References—Sweden is shown on the Society's map of Europe and the Near East. See also "Thumbs Up Round the North Sea's Rim," in *The National Geographic Magazine* for May, 1952; "Baltic Cruise of the Caribbee," November, 1950; "Rural Sweden Through American Eyes," June, 1940; "Life's Flavor on a Swedish Farm," September, 1939; and "Country-House Life in Sweden," July 1934 (out of print; refer to your library); and, in the GEOGRAPHIC SCHOOL BULLETINS, March 2, 1953, "English Now Required in Swedish Schools."

Stockholmers Hit the Deck for Coffee and Cakes—In the harbor of Sweden's capital, a former merchantman and naval training ship continues active service as a youth hostel. With added heat, lights, and showers, the venerable full-rigger gives all the comforts of home or hotel to young visitors from Swedish provinces or foreign lands. At noon the gleaming white-railed decks become a cafeteria, complete with the *smörgås* (open-faced sandwiches), cakes, and coffee for which Sweden is noted.

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UMI

Bulletin No. 2, October 12, 1953

Sweden's Capital Celebrates 700th Birthday

SWEDEN, largest of the Scandinavian nations, this year celebrates the 700th anniversary of the founding of its capital, Stockholm.

Sprawling over flowered and forested islands tied together by a network of bridges, this "Venice of the North" is more new than old in spite of its actual hoary age. Two-thirds of its buildings were erected in the 20th century. Along tree-lined waterways rise massive structures of super-modern design.

From Sweden, one of Europe's oldest kingdoms, came the style of straight, unadorned lines known as "Swedish modern." This combination of beauty and utility has helped to revolutionize home furnishings the world around. Sweden has set a pattern for the newest of the new in furniture, textiles, china, and glass. Exhibits of handicrafts are sent all over the country to encourage the Swedes to have "more beautiful things for everyday use."

First a Fort, then a Port—Stockholm began as a fort on the island of Stadholm at the junction of Lake Malaren and the Baltic. It soon developed a brisk trade with Britain and the Baltic ports. Spreading from isle to isle, its slow but steady growth speeded up in its seventh century. From a city of less than 100,000, it has jumped to nearly 1,000,000.

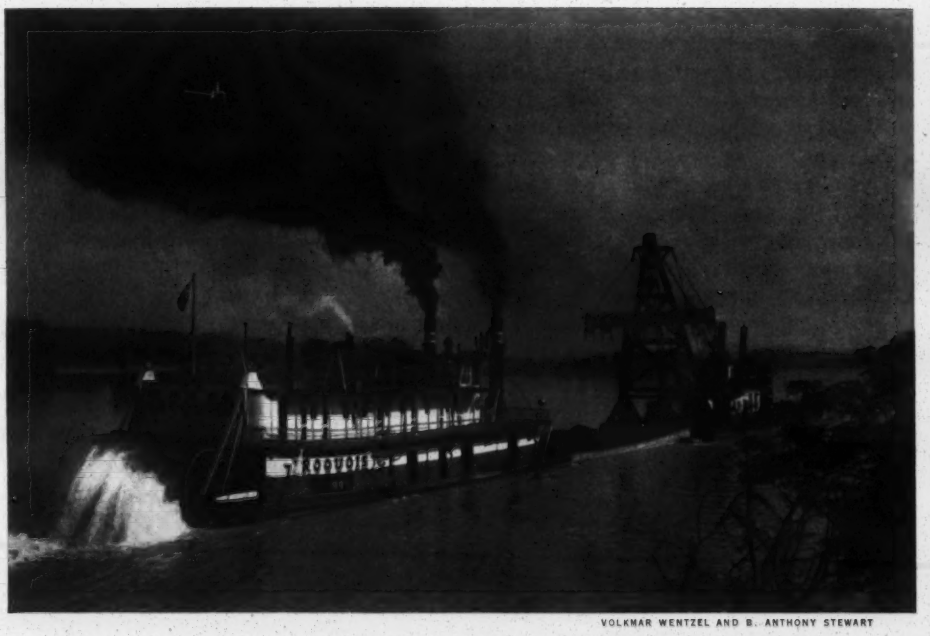
The king's palace, neither glamorously ancient nor arrestingly modern, stands on the site of one burned in 1697. Because so many of the houses were built of timber, they have vanished in the successive great fires of several centuries. For the most part, they have been replaced by durable buildings of native granite, the backbone and framework of Sweden.

Near the middle-aged palace rises the medieval Storkyrkan (Great Church), Stockholm's oldest building. Beyond lies the Old Town, an area of tall, shadowy houses facing each other across narrow lanes which follow the twisting routes traced by the city's early settlers.

Stockholm's mammoth modern apartment houses are painted soft, pale tints, brightened with gay red, blue, and orange awnings and shutters. Although the northern summer is brief, the Swedes make the most of it. They crowd outdoor cafés and bathing beaches, and whiten the harbor with the sails of their yachts. In enthusiastic droves, they go down to the sea in anything that will float. Yacht races are a popular sport and during sunny weeks the channels through the little rocky islets offshore—the "skerries"—teem with boats of all shapes and sizes.

A Rich and Varied Land—Sweden's natural resources are many and varied, like the land they enrich. Kiruna's iron ore is quarried from massive Mt. Kiirunavaara in the bleak region inside the Arctic Circle. Nearly 1,000 miles south the fertile grainfields of Skåne fill the southern bulge into the Baltic. In the interior, forests of spruce, pine, birch, aspen, and oak soften the rugged granite outcroppings. Timber floats down the rivers to sawmill towns midway along the east coast. Copper, gold, silver, zinc, and manganese are mined in moderate quantities.

Although Sweden is largely agricultural, more than half of its people live by industry and commerce. Besides mining, occupations include wood-



VOLKMAR WENTZEL AND B. ANTHONY STEWART

Namesake of an Indian Tribe Chugs and Churns up the Ohio—Smoke from her stacks and foam at her stern wheel mark the path of this towboat which U. S. Army Engineers use in their work of maintaining navigation channels. The 148-foot stern wheeler is pushing a dredge and a string of barges which the Engineers employ in their job of repair and maintenance. The towboat serves both military and civilian commerce along the waterways of the far-flung Mississippi system.

the Mississippi Valley. Some 4,000 submarines, destroyer escorts, landing craft, and tankers floated down the river from inland shipyards to the open sea.

Today, the Mississippi River system is the most extensive and highly developed waterway in the world. There are 25 locks and dams in the upper Mississippi from Alton, Illinois (just north of St. Louis, on the east shore), to St. Paul, Minnesota; 46 in the Ohio River from Cairo, Illinois, to Pittsburgh, Pennsylvania; and 11 in the Illinois Waterway which connects the Great Lakes with the Mississippi Basin.

References—The course of the Mississippi River may be traced on the Society's maps of The United States of America, North Central States, and South Central States.

See also, "New Orleans: Jambalaya on the Levee," in *The National Geographic Magazine* for February, 1953; "So Much Happens Along the Ohio River," February, 1950; "Down Mark Twain's River on a Raft," April, 1948; and "Men Against the Rivers," June, 1937; and, in the GEOGRAPHIC SCHOOL BULLETINS, November 20, 1950, "Ohio River Is Nation's Top Cargo Stream."

"Everyday Life in Ancient Times"

A volume compiled by the National Geographic Society brings to life the peoples of the ancient lands where Western civilization originated—Mesopotamia, Egypt, Greece, and Rome. Illustrated with 120 full-color paintings by H. M. Herget and written by four noted authorities, the 356-page volume is available to schools at $5.00 a copy postpaid in the United States and its possessions, and $5.25 abroad.

UMI

Bulletin No. 3, October 12, 1953

Towboat Tops Steamer in Mississippi Traffic

NEW KING of the Mississippi is the snub-nosed towboat. Pushing trains of steel barges up and down the big river and its tributaries, the sturdy vessels hauled 33,000,000 tons of freight last year. This is three times as much as more glamorous steamboats carried at their busiest period, a hundred years ago.

The towboat is the river version of the railroad locomotive, only it pushes rather than pulls its train. It has a blunt prow so that one boat can move barge fleets hauling 15,000 or 20,000 tons. This is equal to 400 to 600 railway freight cars.

Headed to the Gulf of Mexico, the enormous barge fleets carry coal from the mines of West Virginia, Pennsylvania, and Kentucky; gasoline from Illinois refineries; grain from America's "breadbasket" in the north central states; and structural steel and iron pipe from the mills of Pittsburgh, Pennsylvania, and Gary, Indiana.

Cargoes from Foreign Lands—On upstream runs the barges bring to inland markets coffee from Brazil and El Salvador, nitrates from Chile, bauxite from Surinam, canned goods from fruit- and vegetable-growing regions of the Pacific coast, sugar from Cuba, hemp from Manila, and burlap from India.

Samuel Clemens grew up on the Mississippi and dreamed of becoming a river pilot. He later took his pen name—Mark Twain—from a call rivermen used to indicate the water was two fathoms deep. Clemens was fascinated by the deft way in which the pilots maneuvered packet boats around sharp bends, through swift eddies, and along narrow channels. The towboat pilot is just as skillful.

Towboats are 100 to 300 feet long with up to 2,000 horse power. They push as many as a dozen barges, which vary in length from 175 to 280 feet and in width from 26 to 48 feet. Most of them have an 11-foot draft. They can transport from 850 to 2,000 tons each.

River shipping, big business today, is being modernized. Propeller ships powered by diesel engines have taken the place of most of the stern-wheeler towboats (illustration, below). The modern ships have comfortable, spacious cabins for officers and crew, tile-floor galleys, and electric refrigeration. Barge lines now make headquarters in sleek city office buildings instead of in the water-front shacks where they carried on business in the early days.

Vital in Wartime—A few towboats and barges churned the Mississippi during the packet-boat era of the 19th century, but when the railroads came this river shipping almost went out of business. It was 50 years before it picked up again.

When World War I broke out, the river fleet came back to life. The government established a barge service between St. Louis and New Orleans to help the overworked railroads carry wartime cargoes. When peace came this barge service was busier than ever.

During World War II river traffic again joined the armed forces. Essential supplies and equipment for the fighting forces flowed through

makers. Each October 12, the 800,000 islanders honor the cartographer who put them more accurately on the map.

Recent research has confirmed a belief that Columbus was a professional map maker. He and his brother for a time made a living from a cartographic business in Lisbon. A map drawn by Columbus himself lay unnoticed in the files of the National Library in Paris for more than a century before a patient search recently revealed its true designer.

Sailed Due West from the Canary Islands—Columbus made his first landfall in the New World at an island in the Bahamas which its inhabitants, Arawak Indians, called Guanahani. Columbus named it San Salvador, and later it was also called Watling. From San Salvador the fleet of three small ships—the 100-ton *Santa Maria*, on which the admiral sailed, and the *Pinta* and *Niña*, only half as large—zigzagged through the West Indies. They landed at Rum Cay, Long Island, and Crooked Island in the Bahamas, and at Cuba and Hispaniola. The latter island reminded Columbus so much of Spain that he named it *La Española*. (As "Hispaniola" it now comprises the Dominican Republic and the Republic of Haiti). The explorers collected trinkets of gold, parrots, plants, pieces of Indian cloth, and even a few Indians.

In 1493, bearing the imposing title, Admiral of the Ocean Sea, Columbus led a second expedition of three galleons and 14 frigates. About 1,000 colonists sailed with them. On this voyage the admiral discovered the Virgin Islands, the Leeward Islands, Puerto Rico, and Jamaica, and established on Hispaniola the first European colony in the New World.

Hoping to find more gold than his first trips had collected, Columbus sailed farther south on his third voyage, in 1498. Again, as on the first trip, he had only three small ships—one decked ship and two caravels. He discovered Trinidad (noted for its pitch lake), only 16 miles off the coast of Venezuela. And for the first time he set foot on a continent—that of South America. The admiral's fourth and last voyage added Honduras and Panama to his list of New World discoveries.

Monument Symbolic of Columbus's Faith—Columbus, a devout Christian, marked the paths of his explorations with crosses. An echo of this custom is the mammoth memorial lighthouse being built at Ciudad Trujillo, the Dominican capital, on the island first settled.

In the form of a giantic cross of white marble, the monument is three-quarters of a mile long. It lies on the ground, pointing west, with the short arms extending toward North and South America. Where they cross the monument rises 120 feet. It is to serve as a tomb for Columbus, whose bones now lie enshrined in the cathedral in the Dominican capital. Also it will be a beacon to light the way for modern mariners. Powerful lights set in open lines through the center of the monument will project a cross of light in the sky. This beacon will symbolize Columbus's words: "You shall put crosses on all roads and pathways . . . for as this land belongs to Christians . . . the remembrance of it must be preserved for all time."

References—The Society's map of Countries of the Caribbean and The World Map show the areas of Columbus's voyages and the lands he discovered.

See also, "The Land Columbus Loved," in *The National Geographic Magazine* for Feb., 1944; and "Genoa, Where Columbus Learned to Love the Sea," Sept., 1928.

UMI

B. ANTHONY STEWART

An Archbishop Guards the Tomb of Columbus—Under a gothic arch marked with his name in Spanish, the bones of Christopher Columbus rest in the cathedral in Ciudad Trujillo, capital of the Dominican Republic. A high church dignitary, the Primate of the Indies, holds the key to the crypt.

Bulletin No. 4, October 12, 1953

Peoples of Many Lands Mark Columbus Day

FROM GENOA, Italy, across the seas to the West Indies, and up and down the Americas, peoples of many nations honor the "Admiral of the Ocean Sea" on October 12. On that day, in 1492, Christopher Columbus discovered America.

Spain, whose King Ferdinand and Queen Isabella sponsored the Columbus expeditions, observes Columbus Day as a national holiday. At Palos de la Frontera on the Gulf of Cadiz, a monument marks the point from which the great navigator sailed on his history-making first voyage which gave the Old World a whole new hemisphere for colonization.

The Pan American countries and many of the 48 states officially remember the day. New York City closes offices, tears up telephone books, and celebrates with a parade. Genoa does not forget her famous son. Columbus in his will described himself as a native of that Italian city. (Another Italian town—Casale Monferrato—has recently joined the list of those claiming to be the birthplace of Columbus.)

Columbus's four voyages to the New World included stopovers in the Canary Islands, off the northwest coast of Africa. Ancient geographers believed these islands were the western edge of the world. After Columbus discovered America they were a port of call for westbound Spanish ships instead of the terminus they had been since the days of the earliest map

cover) still teem with big-game varieties. On land are many species of birds, animals, and insects. Scientists, often spending days at a time in tree-top platform "blinds", study and gather specimens of insects, small snakes, tiny toads, ants, beetles, and spiders.

Once a hotbed of malaria and yellow fever, Panama now ranks as a healthy tropical country. From its capital, the city of Panamá, the government strictly enforces mosquito control and sanitation. The country is about one-half the size of Florida.

Panama boasts two independence days. It declared its freedom from Spain on November 28, 1821, and voluntarily joined Colombia. Then, 50 years ago, on November 3, 1903, it seceded from Colombia and established itself as a free republic, thus paving the way for the treaty with the United States that led to the building of the canal. It is this second date that is legally recognized and celebrated.

Some manganese deposits are worked, and reports circulate that coal, iron, and asbestos may some day be added to the mineral list. But today's chief exports are agricultural—bananas, abacá fiber, coffee, rice, and sugar.

Progress in Education—All children between the ages of seven and fifteen must attend school. With more than 1,100 schools, ranging from primary level to the National University, and including technical and commercial colleges, there is a school for approximately every 750 of Panama's 817,000 inhabitants.

With the discovery of gold in California in 1849, many gold seekers headed toward California by way of Panama. A boom set in, and prices skyrocketed. Promoters built a railroad across the isthmus, but the last rail was not laid until January 27, 1855. The road prospered for many years before it failed.

Then began serious plans for the long-talked-of canal. A French company under Ferdinand de Lesseps, builder of the Suez Canal, started work in 1879. De Lesseps was determined to build a canal without locks. This idea, plus geographical handicaps of mountain and river, and the prevalence of malaria, doomed the project. The United States began digging in 1903 and finished the big ditch August 15, 1914.

Pacific Entrance Lies East of Atlantic—A traveler going through the Panama Canal heading for the Pacific travels southeastward and reaches his destination at a point farther east than that from which he started. This is due primarily to the fact that the isthmus is somewhat like a letter "S" lying on its side and running from east to west. The Canal itself, taking advantage of rivers and lakes, runs from Colón, its Caribbean, or "eastern" entrance, in a southeasterly direction to Panama, on the Pacific, which accounts for the seeming contradiction of going west by traveling southeast!

References—Panama is shown on The Society's map of Countries of the Caribbean.

For additional information, see "Hunting Prehistory in Panama Jungles," in *The National Geographic Magazine* for August, 1953; "Exploring Ancient Panama by Helicopter," February, 1950; "Exploring the Past in Panama," March, 1949; and "Panama, Bridge of the World," November, 1941.

See also, in the GEOGRAPHIC SCHOOL BULLETINS, February 2, 1953, "Panama Canal Treaty Signed 50 Years Ago"; and "First Panama Coast Study Since Columbus," February 5, 1951.

PHILIP GENDREAU

Shaded Benches Line Panama City's Sidewalks—People relax or stroll leisurely along the mosaic-patterned stones. In the background (right) is the ever-present newsstand, backed by Spanish-style buildings with balconies and arcades. This bit of old Spain in the capital of Panama contrasts with other sections that are completely modern.

Bulletin No. 5, October 12, 1953

Panama's "Mules" Still Haul Treasures

IN the days of the Spanish conquest gold-laden mules struggled through the steaming Panama jungles carrying Inca treasures to fill the hungry holds of Spanish galleons.

Today "mules" still haul treasures across Panama. But they are electric and travel on rails beside the Panama Canal. They pull vessels through this vital shortcut and help distribute the world's wealth.

Thus Panama and its Canal Zone have become not only a crossroads of the world but also an international trading post. Here the traveler or tourist may buy almost anything—costly French perfumes, Japanese kimonos, English leather goods, Panama hats from Ecuador, Dresden china, and Mexican pottery.

Scientists' Paradise—The name "Panama" is from an Indian word meaning "abundance of fish". The waters of both coasts (illustration, back

RICHARD H. STEWART

Nature Provides the Materials for Man to Build His Own "Castle" in Panama

Saplings lashed together with vine fibres make framing and roof timbers. Featherlike dried palm leaves cover the roof and provide cool and comfortable homes at a cost of few hours work. Wall siding and porch timbers were probably sawed locally. These houses at the mouth of Río Indio (Indian River) on Panama's north coast rise high on stilts to avoid flooding during seasonal high waters (Bulletin No. 5).